

RESERVE COMPONENT AUTOMATION SYSTEM (RCAS)



Army ACAT IAM Program

Total Number of Workstations:	56,000
Total Program Cost (TY\$):	\$972M
Average Unit Cost (TY\$):	\$17K
Life Cycle Cost (TY\$):	\$2,530M
Full-rate Production:	2QFY97

Prime Contractor

Science Applications International
Corporation (SAIC)

SYSTEM DESCRIPTION & CONTRIBUTION TO JOINT VISION 2010

The Reserve Component Automation System (RCAS) is an automated information system that supports commanders with information needed for Reserve Component mobilization and day-to-day administrative operations. It is a sustaining base networked system of workstations, primarily employing commercial-off-the-shelf (COTS) and government-off-the-shelf (GOTS) software applications. RCAS will interface with numerous existing and future Standard Army Management Information Systems, certain National Guard standard systems, and systems designated by the Office of the Chief, Army Reserve. RCAS supports the *Joint Vision 2010* concept of *information superiority* by supporting the readiness of the Army Reserve Components, increasing their responsiveness and enabling them to rapidly integrate into joint organizations. Further, RCAS provides the communications and coordination capabilities necessary to mobilize the Army Reserve Components.

RCAS is scalable and compliant with open systems environment standards. The current base system employs the Microsoft Windows NT® operating system. Office automation tasks use Microsoft

Office® applications. A separate application, JetForms®, is used for creating and maintaining forms. Government-off-the-shelf software applications and interfaces, such as Unit Level Logistics System, Standard Property Book System-Redesigned, and Standard Installation/Division Personnel System Version 3, will be incorporated in several increments.

BACKGROUND INFORMATION

In 1979, the Secretary of the Army approved a Mission Element Need Statement for an automated data system to support the mobilization process of the Reserve Components. This need was addressed with the Army Continental Army Management Information System (CAMIS), begun in the early 1980s, but canceled in 1985. CAMIS was then reprogrammed in 1986 (as RCAS) under the provisions of OMB Circular A-109. The RCAS acquisition was placed under the control of the Chief, National Guard Bureau, with advice of the Congress and the Chief, Army Reserve. The original Mission Need Statement for the RCAS program was approved in September 1988. The RCAS was initially precluded from using any government-furnished hardware or software. The development contract was awarded to Boeing Computer Services, Inc. (now SAIC) in 1991.

The RCAS Program Management Office (PMO) held a Limited User Test in August and September 1992 to demonstrate basic RCAS capabilities, but major deficiencies were found. After several attempts to correct system shortcomings, the program was restructured in 1995, and the restriction regarding government-furnished elements was removed. A beta demonstration was conducted for the restructured RCAS program at several Army Reserve and Army National Guard sites in fall 1995. Subsequently, the Army Validation Assessment Team accepted the revised RCAS solution. The mission needs were revalidated in April 1996.

During 4QFY96, the Army OPTEC conducted IOT&E for RCAS Increment 1, consisting of the Windows NT® local area network servers and the basic user PC (Pentium®) workstations, Microsoft office automation, and e-mail applications. A mobilization training exercise was included as a test event. IOT&E was conducted at 11 sites (34 units) of the Iowa Army National Guard and 6 sites (11 units) of the 99th Regional Support Command of the U.S. Army Reserve in western Pennsylvania. Based upon IOT&E, Increment 1 of RCAS was judged to be operationally effective and suitable, provided the functional users augment the system administrator staffing and the PM improve training, logistics support, and security procedures. An abbreviated assessment was later conducted and the results showed that the revised training plan and updated procedures were adequate.

An OT&E of RCAS Increment 2 was conducted by the Army OPTEC from September-October 1997. Five critical operational issues and five additional operational issues were evaluated during the 22-day test period. The major new elements added to RCAS in Increment 2 are the Unit Level Logistics System-Ground, Unit Level Logistics System-S4, and the Standard Property Book System-Redesign. OT&E was conducted at 13 sites (39 units) of the Iowa Army National Guard, employing 563 workstations (38 Classified). In addition, OT&E included 62 sites of the 99th Regional Support Command of the U.S. Army Reserve, involving 441 workstations (18 Classified) located among 105 units in Pennsylvania, West Virginia, Maryland, and Virginia.

Increment 2 testing results showed the system to be operationally suitable and survivable, but not effective due to poor connectivity at small sites and inadequate forms processing. The PMO fixed these problems and OPTEC conducted a follow-on OA to determine whether the fixes were successfully made. After reviewing the test results, DOT&E determined that RCAS Increment 2 was operationally effective and suitable on December 10, 1997.

TEST & EVALUATION ACTIVITY

A Limited User Test (LUT) of RCAS Increment 3 was conducted in July 1999, with follow-on testing activities in September, at eight Iowa Army National Guard sites (46 users), 99th Regional Support Command in Pennsylvania (3 users), US Army Reserve Command in Georgia (21 users), and National Guard Bureau in Virginia (12 users).

RCAS Increment 3 provides a number of new COTS/GOTS applications, including Emergency Information System, Federal Logistics System, and Standard Army Training System. Three previously fielded GOTS applications were upgraded, including Unit Level Logistics System-Ground, Unit Level Logistics System-S4, and Standard Property Book System-Redesign. In addition, the RCAS PMO developed three new applications, including Force Authorization, Commander's Clipboard, and Unit Personnel System/Command Management System.

The primary focus of the Increment 3 LUT was on the normal day-to-day usage of the newly added and upgraded application capabilities. Further, regression testing of the Increment 1 and 2 office automation and mobilization planning capabilities was conducted to ensure that they remain operationally effective and suitable. The ability of the RCAS end-users to perform mission tasks using RCAS in daily unit operations provides the basis for the operational evaluation.

TEST & EVALUATION ASSESSMENT

Preliminary results showed that the fundamental computing infrastructure, consisting of personal computers, Microsoft NT operating system, and COTS network systems, continued to perform well. The e-mail and file transfer capabilities were successfully used by the users to exchange messages and documents. Three upgraded applications: Unit Level Logistics System-Ground, Unit Level Logistics System-S4, and Standard Property Book System-Redesign, remain robust. In addition, the two new GOTS applications—the Federal Logistics System and the Standard Army Training System—also performed well.

Test data collected by ATEC during the LUT was not sufficient to conclusively determine the effectiveness and suitability of the new applications: Emergency Information System, Force Authorization, and Commander's Clipboard. As a result, DOT&E recommended to the Information Technology Overarching Integrated Product Team that additional data be collected to complete the OPEVAL. The additional data collection is expected to complete in early 2000. DOT&E will continue to work with the Reserve Component functional communities, ATEC, and RCAS PMO to maintain the effectiveness and suitability of RCAS.

